

**To:** Guy, Kerry[Guy.Kerry@epa.gov]  
**From:** Williams, Laura  
**Sent:** Fri 8/28/2015 6:01:25 PM  
**Subject:** Re: Temporary and Interim Water Treatment Options

Thanks Kerry!

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From: Guy, Kerry  
Sent: Friday, August 28, 2015 11:25 AM  
To: Williams, Laura  
Subject: Re: Temporary and Interim Water Treatment Options

Laura---this was a work in progress matrix so not sure we should send around but take a look at the first couple columns that have mob cost and operating cost. If you multiply the operating costs by 12 months you see we get over 3 million for the ---some higher. we also evaluated was their ability to promptly get up there and start treating-----we were a little taken by the length of time they needed to get operational. Other factors as well.

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From: Williams, Laura  
Sent: Friday, August 28, 2015 9:53 AM  
To: Guy, Kerry  
Cc: Way, Steven; Poetter, Joe  
Subject: Re: Temporary and Interim Water Treatment Options

Kerry and/or Steve:

Do you have a ballpark estimate of the water treatment costs: both for the treatment development (modular units or ponds) and monthly, winter operating costs? I'd like to include these in the GKM estimate we provide to HQ today. Thank you, lw

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From: Guy, Kerry  
Sent: Thursday, August 27, 2015 6:29 PM  
To: Way, Steven  
Cc: Powell, Greg; Griswold, Hays; Williams, Laura; Brobst, Bob; Myers, Craig  
Subject: Re: Temporary and Interim Water Treatment Options

Yes--I confirm that the evaluation team is unanimous in this decision. The modular units are too costly compared to what can be done at the site with earthen lined ponds-- greater than 3 times what we can expect to incur by building ponds at Gladstone. In addition, they require extensive support by us.

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From: Way, Steven  
Sent: Thursday, August 27, 2015 5:13 PM  
To: Guy, Kerry  
Cc: Powell, Greg; Griswold, Hays; Williams, Laura; Brobst, Bob; Myers, Craig  
Subject: Temporary and Interim Water Treatment Options

Kerry,

As follow up to our conference call, the technical review team provided an excellent assessment and recommendations to allow the operations to move forward. Based on the proposals and costs estimates, the "package" systems are unreasonably costly for the period of performance.

The consensus among the technical team and site personnel is the best path forward is to prepare the upper level of the Gladstone area to perform lime addition with appropriate settling ponds.

The START engineer with the OSCs have identified an area and configuration that can be used for this purpose. A figure was provided to you earlier today. We look forward to the additional recommendations for designing the retention cells and components for the lime addition.

Currently, ERRS is working on a cost estimate to develop and operate this type of system. Also, there are local experienced personnel who have run the treatment operations when the mine was active.

Please confirm our that this is our best path forward if water treatment is in fact needed on an interim basis ( possibly 12 months).

Thank you,

Sent from my iPad